



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

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MAY 03 1989

Mr. Mark Travers
Project Coordinator
Novak Sanitary Landfill Site
c/o de Maximas, inc.
P.O. Box 90348
Knoxville, TN 37990

Re: Draft RI/FS Work Plan

Dear Mr. Travers:

EPA has reviewed the Draft RI/FS work plan for the Novak Sanitary Landfill site in Lehigh County, PA. The document was prepared by Geraghty & Miller, Inc. on behalf of Respondents to a Consent Order with EPA dated December 31, 1988 (Docket No. III-89-10-DC). Our comments, suggestions, and recommendations are summarized in the attachment to this letter.

Although the work plan is technically sound and proposes many of the tasks necessary to complete the RI/FS, some issues remain to be included or discussed. EPA's comments indicate clearly the identified weak areas and make suggestions for improvement. I feel that we can quickly resolve the remaining issues and achieve a final work plan before the time allotted in the Consent Order if we meet to discuss any issues for which you desire clarification. I suggest that we meet in Philadelphia on either May 18, 1989 or June 1, 1989 after you have had a chance to review the comments.

Please contact me at (215) 597-3166 to confirm a meeting date. Feel free to call me to discuss any of the comments and your proposed solutions.

Sincerely,

Michael Towle
Remedial Project Manager

Attachment

cc: James Feeney, EPA
Joseph Donovan, EPA
Ronald Klinikowski, PADER
Kenneth Gelburd, PADER

AR302344

EPA COMMENTS ON DRAFT RI/FS WORK PLAN
NOVAK SANITARY LANDFILL SITE

1. The background information is well summarized. The document should emphasize more that problematic issues during the site's operation included the drainage of surface water on the site and the appearance of leachate seeps since these represent possible pathways of contaminant release to the environment. The history of drainage and leachate problems, as well as the proximity of the retention pond to Jordan Creek, has prompted the Bioassessment Work Group to focus on possible damages to nearby Jordan Creek.

ACTION: Review landfill operational documents and revise background sections to reflect observance of leachate and history of drainage problems. Include discussion of construction and efficiency of retention and drainage of surface water on and from the site.

2. During the Site Reconnaissance (Section 3.1.2), Geraghty & Miller should exercise care to identify the following features on or adjacent to the site which may be impacted by the RI/FS or any proposed remedy to assure that the RI/FS and selected remedy are functionally equivalent with NEPA:

- A. Areas of historical and /or archaeological significance
- B. Recreational areas
- C. Farm land
- D. Wetlands
- E. Floodplains
- F. Threatened or endangered species
- G. Critical habitats
- H. Flora and fauna, stressed vegetation

ACTION: During the site reconnaissance, identify the existence of or confirm the non-existence of the above on or adjacent to the site, within three miles of the site, or in an area which may be impacted by the RI/FS or any selected remedy. Contact with local, state and federal government agencies is recommended. A discussion of the results of this investigation should appear in the site characterization section of the RI Report.

3. INVESTIGATION OF JORDAN CREEK - EPA strongly recommends conducting the second phase of the Jordan Creek investigation as part of the initial Remedial Investigation. Due to: 1) the site's history of surface water drainage problems and leachate problems, 2) current outbreaks of leachate at the site, 3) high levels of

contaminants in the leachate, 4) proximity of the site and the surface drainage system to Jordan Creek, and 5) the steep gradient from the site to Jordan Creek and the floodplain. EPA believes that circumstances warrant early investigation of the Jordan Creek. The surface water/leachate runoff pathway or migration has not been adequately addressed and should be identified as a data gap.

RECOMMENDED ACTION: Conduct surface water and sediment sampling in Jordan Creek concurrent with other environmental sampling during the early phases of the RI/FS. The investigation of Jordan Creek should occur regardless of "present" conditions of site drainage and in accordance with the first "purpose" of the field investigation as described on page 19 of the work plan. Geraghty & Miller must also be prepared to consider factors other than Ambient Water Quality Criteria when determining impacts or potential impacts to Jordan Creek.

The following surface water and sediment parameters should be measured to support the investigation and evaluation of Jordan Creek:

A. SURFACE WATER

1. Field parameters
 - a. temperature
 - b. dissolved oxygen
 - c. Eh
 - d. pH
 - e. specific conductance
2. Laboratory parameters
 - a. total suspended solids
 - b. alkalinity
 - c. hardness
 - d. optional
 1. BOD
 2. COD
 3. total dissolved solids
 4. total organic carbon

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B. SEDIMENT

1. Field parameters
 - a. temperature
 - b. Eh (all EPA 9045)
 - c. pH
 - d. specific conductance (EPA 120.1)
 - e. color
2. Laboratory parameters
 - a. total organic carbon (EPA 415.13, combustion methodology; TOC = % organic carbon)
 - b. grain size analysis (ASTM method with hydrometer)
 - c. % moisture (RAS)
 - d. % solids (RAS)

4. Wetland and floodplain in the vicinity of the site must be delineated.

ACTION Delineate any wetland and floodplain identified in the site reconnaissance. Findings and delineations should be reported in the RI Report.

5. The site should be secured to prevent trespassers from coming into contact with the waste. EPA recommends an evaluation of the existing fence during the site reconnaissance and a proposal to immediately remedy faulted security.

ACTION Submit a proposal to secure the site, if necessary, from trespassers early in RI/FS. If security at the site is not an issue, report the findings to EPA in a monthly progress report.

6. Geraghty & Miller and Respondents must propose to implement a plan to address issues with the local community. EPA will set up a community relations plan and obtain a contractor to implement the community relations plan. Respondents must similarly set up a contact to deal with community concerns.

ACTION Include community relations and public affairs as part of the RI/FS at Novak Sanitary Landfill.

7. The number of monitoring wells is satisfactory in light of the statements indicating that additional wells will be necessary if initial assumptions concerning ground water flow were incorrect. For example, a well cluster will be installed to the south of the site if ground water is found to be moving in that direction. EPA however strongly recommends the construction of a "shallow" monitoring well between the site and Jordan Creek along the southeast-trending fracture trace which intersects well #6, since the existing monitoring well network was unable to definitively demonstrate that flow does or does not flow from the site to the Creek and well #6 is contaminated. EPA feels strongly that the absence of a well south of existing well #6 will be a data gap in the RI Report and the proposed network may still be unable to demonstrate flow directions in the vicinity of the Creek.

RECOMMENDED ACTION Construct a monitoring well along the fracture trace trending southeast from monitoring well #6. This well should intercept the first 30 to 50 feet of saturation.

8. The work plan should discuss the development of data quality objectives and the use of these DQOs in the RI/FS.

ACTION Review applicable EPA guidance and present DQOs in the

work. The work plan should begin to develop DQUS.

9. The document fails to acknowledge that a gaining reach of the Jordan Creek also passes close to the site. If site contaminated ground water is found to be moving south of the site, additional investigation concerning the relationship between ground water and surface water in the vicinity of Jordan Creek will be necessary. Such investigation may include installation of piezometers, water quality sampling and a water budget.

RECOMMENDED ACTION See Wood (1972). Include existence of gaining reach of Jordan creek in the investigation of the site and evaluate possible flow of ground water to the Creek in the RI/FS.

10. More information concerning the volume of wastes disposed at the site is necessary. The information can be presented in the RI Report as it might affect the selection of particular remedial alternatives. The work plan should include a task to collect all site waste information which may be helpful in the process of selecting or evaluating remedial alternatives. Cross sections depicting waste volume should be presented in the RI Report.

ACTION Review landfill operational records and engineering designs and estimate total waste volume and waste distribution. Present findings in RI Report. Include cross sectional views of site which depict waste area and depth.

11. The venting of methane gas at the landfill is not addressed in the work plan. If the landfill is venting gas and this gas contains contaminants (as previously suggested in the evaluation of water samples from MW-1B), the potential impacts from the gas venting should be addressed.

ACTION Monitor and analyze emissions from the landfill. Employ simple models to determine potential adverse effects, if any.

12. The placement of monitoring wells on or in the fractures beneath the site is critical. The existing wells are characterized by poor yields so extreme care should be taken when selecting a field location for constructing the monitoring wells.

RECOMMENDED ACTION EPA recommends the use of a surface geophysical method to help locate fractures. A method utilizing resistivity and azimuthal arrays may be suitable for such an investigation. The electrical resistivity work may also help identify the locations of off-site migration of contaminants.

13. The rock core should be collected from a location which enables Respondents to retrieve rock core from the top of bedrock to the bottom of a deep hole. The work plan indicates that approximately fifty feet of core will be collected from the borehole at location MW-9. Figure 5 suggests that more than 50 feet of core should be collected at this location.

RECOMMENDED ACTION Collect rock core from the top of the bedrock to the bottom of borehole at new well MW2.

14. Hydraulic testing of the aquifer beneath the site will be necessary to properly evaluate some of the probable remedial alternatives for the site.

RECOMMENDED ACTION EPA recommends that some of the wells at the site be tested to determine the aquifer values of transmissivity. The testing may be conducted at any time during the RI/FS and may be traditional pump testing or slug testing. If wells have been tested previously, submit the information to EPA to initiate discussions to determine the necessity of additional testing.

15. EPA recommends that certain geophysical logs and borehole tests be run in deep well(s) to determine the nature of the ground water flow system at the site. Conductivity, temperature and caliper logs are simple and relatively inexpensive methods of retrieving information on the extent of fractures, productive zones, and water quality in the vertical dimension. Packer tests can be used to determine flow productivity from specific intervals. Samples from discrete packed intervals will enable Geraghty & Miller to definitively evaluate the location of contaminated flow into contaminated wells such as MW#6. If MW#6 were packer tested early in the investigation, the possibility exists that deeper drilling could be avoided.

RECOMMENDED ACTION Evaluate the usefulness of these tests and consider conducting these tests at selected boreholes in the RI/FS. Discuss the various alternatives with EPA. Propose reasons why such tests should or should not be (could or could not be ?) performed.

16. Figure 1 should include a North arrow for those readers who don't know the typical orientation of symbols and lettering on U.S.G.S. maps. The table of contents should identify the page numbers for tables and figures. One of the figures should identify the retention pond and drainage ditches on the site. Figures 4 and 5 should include features such as landfill boundary and approximate waste areas. More detailed and exact waste location cross sections can be prepared for the RI Report. A regional geologic map should be inserted in the work plan to help the reader interpret the geology. The local community or public supply wells should be identified on a figure.

ACTION Revise the work plan according to the above comment.

17. The development of a base map ("accurate topographic map" as described on page 20 of the work plan) for the site should be discussed in further detail in the work plan. How will this map be developed ?

18. The RIBOP should include a checklist-type document of those items which will be observed and identified at each of the residences included in the residential well survey.

19. A sample from each of the "unconsolidated borings" should be sent to a laboratory for analysis of organic content (foc). The RIBOP will enable EPA to evaluate the ability of the soil to retard or inhibit the migration of certain contaminants through the unconsolidated deposits and into the ground water.

ACTION Collect approximately three soil samples and determine organic content.

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